

# PestInfo



## INTEGRATED PEST MANAGEMENT FOR SCHOOLS

### PREVENTING MICE AND RATS FROM INVADING YOUR SCHOOL

When mice or rats invade a school, they chew on anything that resembles food or nesting material, including cardboard boxes, books, art projects, plastic bags and their contents, and electrical wires. Mice and rats also make a mess by urinating and defecating wherever they feed, and leaving smelly trails of urine and droppings. Both mice and rats can transmit parasites, diseases, and aggravate allergies.



Roof Rat

#### BIOLOGY AND BEHAVIOR A MISCHIEF OF MICE

The house mouse, *Mus musculus*, lives throughout the United States in open fields as well as in structures. Indoors, mice live in wall voids, above drop ceilings, in drawers and cupboards, on high shelves, and in clutter. They prefer to feed on grains, but will nibble on anything. They can fit through 1/4-inch spaces – that is, under most doors.

#### A PACK OF RATS

The Norway rat, *Rattus norvegicus*, also known as the sewer rat, lives throughout California. Its burrows are found along building foundations, beneath trash piles, around gardens, and in unused sewers and storm drains. Indoors, Norway rats prefer living close to the ground floor in basements and wall voids. The roof rat, *Rattus rattus*, lives in the Western half of California in trees, woodpiles, and debris. Roof rats are good climbers and indoors like to live in attics and ceiling voids. Both rat species are omnivorous – they'll eat almost anything.

### CHECKLIST FOR MANAGING MICE AND RATS

#### MECHANICAL CONTROL

##### RATS

- ✓ **When setting traps**, be aware that rats are cautious, so prebaiting will get them used to feeding from the trap. Snap traps work well when prebaited – keep them out of the reach of children. Sticky traps (or glue traps) are not as effective as snap traps. Rats will usually sense and avoid them.

##### MICE

- ✓ **Place snap traps** in corners with the trigger facing out. Traps can be placed along walls with the trigger end toward the wall. Be aware that at many schools and offices, staff or students who have discovered a live or dead rodent affixed to a glue trap have raised a ruckus. (It's the issue of a quick death with a snap trap or a slow, tortuous death with a glue trap.)
- ✓ **Ultrasonic devices.** Don't waste your money. There is no evidence that these devices consistently repel rodents.

#### CHEMICAL OPTIONS

- ✓ **Prevention through exclusion and sanitation** is the most important way to avoid rodent visitors inside school buildings and on school grounds. If a rodenticide is necessary because of high populations, enclose the poisoned bait in a tamper-resistant bait station. See UC IPM's Pest Notes #7483 (house mice) and #74106 (rats) for guidance.
- ✓ **If mice suddenly invade** an inaccessible place such as a ceiling void, don't scatter pellet bait. Mice sometimes move the bait from well-hidden to public places.

# WHAT YOU CAN DO TO HELP MANAGE RODENTS

## TEACHERS

- Allow food and beverages only in designated areas.
- Minimize clutter in the classroom. Mice love to nest in fabric, stacks of construction paper, and other art supplies. Store these in large plastic boxes with tightly fitting lids.
- Store food in tightly sealed containers, including chow for students, classroom pets, and your own consumption. Remove edible art projects from walls. Ask students to remove food from lockers, cubbies, and desks daily.
- Communicate with custodial staff about evidence of rodents such as gnaw marks, destroyed material, or droppings.

## FOOD SERVICE STAFF

### Food-serving areas

- Clean floors, counters, cabinets, and tables, and vacuum carpets daily in areas where food is served.
- Remove garbage at the end of each day.

### Kitchen

- Store and seal food waste (from prep and serving areas) in plastic bags before removal.
- Clean food-soiled dishes, utensils, appliances, cabinets, shelving, and surfaces by the end of each day.

### Food-receiving and storage areas

- Maintain an inspection procedure for all received goods, and establish procedures for rejecting anything that's infested, leaking, or contaminated.
- Store nonperishable food in pest-proof containers, not in cardboard boxes.

- Place received goods on clean shelves or mobile storage carts.

## CUSTODIAL/MAINTENANCE STAFF

### Indoors

- Seal all electrical conduits, heating ducts, pipes, and pipe chases. Don't seal potential rodent entry points with gnawable material such as rubber, plastic, or wood.
- Weatherstrip doors and windows. Repair all broken panes in windows or skylights. Keep indoor garbage in lined, covered containers and empty daily.

### Outdoors

- Clean all garbage containers regularly. Make sure all outdoor garbage containers have plastic liners and tight-fitting, spring-loaded lids. Don't let garbage spill over the container.
- Empty garbage cans in outdoor lunch areas immediately after lunch and remove any food debris on the ground.
- Collect and move recyclables and stored waste off site at least once weekly.

## GROUNDS STAFF

- Avoid planting fruit-bearing trees – the fruit attracts roof rats. Harvest fruit, including citrus, before you start a rat feeding frenzy.
- Don't plant vegetation directly against buildings because this provides shelter and runways for rodents.
- Thin out or eliminate dense ground covers such as ivy – it creates a perfect rodent habitat.



## WHAT IS INTEGRATED PEST MANAGEMENT (IPM)?

Integrated pest management is a widely accepted approach toward pest management that results in effective suppression of pest populations while minimizing hazards to human health and the environment.

## FOR MORE INFORMATION

Visit DPR's school IPM Web site at [www.schoolipm.info](http://www.schoolipm.info). For additional information about mice and rats see the link to UC IPM's Pest Notes #7483 and #74106. For help identifying rodents, see [www.ipm.ucdavis.edu](http://www.ipm.ucdavis.edu) and click on "Homes, structures, people, and pets."

## THINK OF PREVENTION BEFORE RODENTS INVADE

Before the rodents invade, let's consider the main preventive strategies and how we can avoid rodent invasions in the first place.

### EXCLUSION

#### Rodent-proof the School

Build in pest-proofing strategies that prevent rodent access, make the school easier to clean, and minimize tempting food and nesting material.

### SANITATION

#### Deny Food

Keep the school clean of food scraps. Keep food and beverages only in designated areas.

### HORTICULTURAL FIXES

#### Deny Access

Trim trees and shrubs 3 to 6 feet away from buildings and keep vines off building walls.

